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Implementation of Family Adoption Program (FAP) in medical colleges of India: A snapshot

In India, 65.5% of the population resides in rural areas (as per 2020 statistics) whereas availability of healthcare services is better in urban areas. Access to healthcare for a rural citizen is of major concern. Issues such as health illiteracy, ignorance about communicable and non-communicable diseases, means to reach a health facility, etc. are some of the hurdles which need to be addressed.[1–3] Community engagement in medical education gives students an insight into the living conditions of the people and how they influence their health. Various determinants of health that can influence patients in real life can also be understood through such interactions.[4]

The family adoption programme (FAP) is a part of the undergraduate curriculum of community medicine.[1,2] Being a 'new' initiative, it is expected that it would have its own challenges and opportunities. It involves allotting families to each student and following them up through the undergraduate course. Hence, it is important to understand and address the challenges faced by the colleges in the process of implementation of FAP.

We did a cross-sectional study over 6 months in 2023 after obtaining institutional ethics committee approval. A semi-structured questionnaire, as a Google form through WhatsApp, was sent to heads of departments of community medicine of medical colleges in India. We requested that the form be filled by the designated FAP coordinator/FAP in charge of their institution. The responses from the forms were exported to Microsoft Excel and the data were analyzed.

Of the 52 respondents (<10% of all medical colleges from India), 28 colleges were private institutions, all had implemented FAP and 24 were government colleges, of which 20 had implemented the FAP (Table I).

Seventeen (36.2%) colleges allocated 5 families per student, while in 3 (5.8%) colleges a single family was shared by more than one student. The manpower allotted for conducting FAP visits included faculty, field staff (auxiliary nurse midwife, medical social worker), postgraduate students/junior residents and senior residents. However, 11 (23.4%), colleges, along with the above staff, included interns as well as laboratory technicians, health educators, public health nurses, attendants, local community influencers, etc.

Prior sensitization was conducted for both students and staff members involved in implementation.

Thirty-two (69.6%) medical colleges used in-house transport facilities, while 10 (23.9%) outsourced it. Minority used a hybrid mode of transport.

Most of the colleges which implemented FAP from the academic year 2021 had challenges in terms of transport, lack of manpower, time constraints, etc. The factors which facilitated the smooth implementation and conduct of FAP included proper planning and coordination, faculty commitment, adequate manpower, availability of transport, prior sensitization of the families, cooperation from local leaders, student's willingness, etc. However, 11 (23.4%) of the study respondents felt that in addition to the regular staff, enrolment of interns, and other hospital staff namely clerical staff and laboratory technician aided in the conduct of the programme.

We noticed that a majority of hurdles were student-related 28(57.4%) followed by logistics 27 (55.3%) and faculty related 19 (38.3%). The student-related hurdles were lack of interest, clinical knowledge, absenteeism, language barriers, and syllabus overload. Faculty-related hurdles were centered on staff shortages, particularly during vacations, and coordination difficulties. The absence of transport facilities was a major obstacle to FAP implementation, while some colleges faced challenges in arranging logistics such as weighing machines, BP apparatus, and medications. Others encountered obstacles in selecting implementation sites, coordinating with field staff, liaising with other

TABLE I. Medical college and family adoption programme (FAP)-related information

Variable	*n* (%)
*Zone wise distribution**	
North	11 (21.1)
East	8 (15.3)
South	17 (32.7)
West	16 (30.8)
Number of students admitted annually	
100–150	29 (55.7)
150–200	14 (26.9)
200–250	8 (15.3)
250–300	1 (1.92)
Implementation status of FAP	
Yes	50 (96.2)
No	2 (3.9)
Year of implementation	
2021	39 (75)
2022	13 (25)
Number of FAP visits per week	
1	49 (94.2)
2	3 (5.8)
FAP schedule	
Weekday	23 (45)
Saturday/Sunday	37 (70.6)
Number of students in an FAP visit per visit	
Entire batch	16 (31.4)
Subdivided into groups (in rotation)	36 (70.6)
Number of batches (subdivided) per FAP visit	
1	13 (25)
2	7 (13.5)
3	7 (13.5)
4	10 (19.2)
>4	17 (32.7)
Number of families allotted per student†	
One	17 (36.2)
Two	9 (19.1)
Three	8 (17)
Four	10 (21.3)
Five	2 (4.3)
Family shared by more than one student	1 (2.1)
*Manpower allotted for the FAP visit (*n*=47)*	
Faculty	45 (95.7)
Senior resident	24 (51.1)
Postgraduate students/Junior Resident	32 (68.1)
Field staff (ANM, MSW, etc.)	37 (78.7)
Others	11 (23.4)
Sources of transport facilities	
Entirely owned by the medical college	32 (69.5)
Entirely outsourced	11 (24)
Hybrid	3 (6.5)

* as per Development Commissioner, Ministry of Micro, Small and Medium Enterprises ANM auxiliary nurse midwife MSW medical social worker

departments, insufficient support from local bodies, family preference for private facilities hindering cooperation.

The National Medical Commission has mandated FAP for medical students from the first year and continued throughout the curriculum. The majority of colleges preferred to divide students into teams and rotate them with the other preclinical departments. Since the NMC criteria states that the villages adopted have to be beyond the field practice area, colleges may have difficulty in complying to the 5 family per student norm.

Arumugan *et al*.[5] posted the entire batch for FAP wherein students were divided into 3 batches which was further divided into smaller teams. Prior sensitization was carried out for the students, faculty, paramedical staff, etc. in all the medical colleges in the current study, which was comparable to the study by Langde *et al*.[6] and Arumugan *et al*.[5] As suggested by Vanikar *et al*.[2] it is essential to introduce FAP to the villagers and the stakeholders by addressing Gram Sabha's to sensitize the villagers and gain their confidence and acceptance.

Vanikar *et al*.[2] recommended that at least 10 visits must be planned in the first professional year which was followed by 36 (72%) of the colleges. They also insist that students must be trained to interact with the families prior to the community exposure. There should be at least one ASHA worker with every 25 students who will be entrusted with the responsibility of training students to facilitate interaction with the families and gain their confidence.[2]

We observed that the major hurdles encountered in the smooth implementation of the program were mainly due to lack of transport and logistics, shortage of manpower, language barrier, lack of interest and clinical knowledge in the students. Similar concerns were reported by Yalamanchali *et al*.[7] and Langde *et al*.[6] It was apparent that proper planning, coordination and support was crucial to facilitate smooth implementation of the programme, this was comparable to the views expressed by Langde *et al*.[6]

Conflict of Interest. None declared.

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Movement disorders in diabetes mellitus: Our observations

We have read with interest the case report by Nahid *et al*.,[1] regarding diabetic striatopathy (DS) in an adult with ketotic hyperglycaemia. We commend the authors for their contribution and wish to elucidate several vital aspects.

1. Contrary to the authors' depiction of DS as a rare and 'life-threatening manifestation' of diabetes, we contend that the condition's relative rarity and under-recognition stem from anecdotal evidence such as case reports/series and a handful of retrospective studies.[2–5] Thus, comprehensive analyses on long-term prognosis, recurrence, the emergence of comorbid conditions, and mortality trends are pending.[2,3] From our observations, while DS affects the quality of life if untreated or mismanaged, fatalities specifically attributed to DS have not been reported.
2. In defining DS, the authors align with Chua *et al*. (2020).[5] However, a newer and broadly accepted hypothesis by Dubey *et al*. (2022)[6] encompasses symptomatic DS, clinically isolated DS, and radiologically isolated DS, challenging the necessity of striatal hyperintensity on T1-weighted magnetic resonance imaging (MRI) and contralateral movement disorder as definitive criteria.[6] This underscores the prevalence of clinical–radiological discordance and indicates that diagnosis extends beyond mere blood analysis and neuroimaging findings.[6]
3. The report does not address the lack of awareness among neurologists—and by extension, general physicians and endocrinologists—regarding the spectrum of acute onset *de novo* non-choreoballistic movement disorders associated with DS, which are as prevalent as the classically described hemichorea–hemiballism.[2–10] This oversight by Nahid *et al*.[1] underscores the need for broader recognition of DS's neurological manifestations.
4. Although the authors correctly identify poorly controlled chronic glycaemia as a pivotal risk factor for DS and related movement disorders,[1] this does not account for the instances where rapid correction of hyperglycaemia precipitates or exacerbates movement disorders.[2,3] This suggests that both chronic hyperglycaemia and acute glycaemic fluctuations, potentially due to disruption of the basal ganglia circuitry and failure of striatopallidal blood flow autoregulation, contribute to the pathophysiology of DS.[6]
5. We question Nahid *et al*.'s interpretation[1] of T1 hyperintensity in Figure 2 of their manuscript, proposing instead that the imaging might depict a T2-weighted fluid-attenuated inversion recovery (FLAIR) sequence. The distinction between T2-FLAIR and T1-weighted images, particularly in cerebrospinal fluid darkness and grey–white matter contrast, is critical.[11] Furthermore, we challenge the purported clinical–radiological corroborative intensity changes over the right striatum.[6]

Hyperglycaemia-induced movement disorders often demonstrate remarkable reversibility with correction of hyperglycaemia alone.[2–10] We aim to amplify the imperative for clinicians to employ a broader differential diagnosis approach for abnormal limb movements in patients with DS, emphasizing the criticality of precise movement semiology identification, stringent and prompt blood glucose management, and the utilization of appropriate neuroimaging for expedited diagnosis and prevention of complications. Such diligence can facilitate early diagnosis, circumvent severe complications, reduce unnecessary expenditures, and prevent diagnostic and therapeutic errors.

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